

CLAIMS

What is claim is:

1. Apparatus for scanning an object comprising:

5 an image capture module having at least a lens and a sensors array for capturing light after scanning said object;

a plurality of light sources with different wavelengths for projecting said object through said image capture module;

10 a first translation module connected with said lens and said sensors array of said image capture module, and said first translation module for changing a first location of said lens and a second location of said sensors array according to using different said light sources; and

15 a power module connected with said first translation module and said light sources for supporting energy to said first translation module and said light sources.

2. The apparatus of claim 1, wherein said light sources comprise a visible light source and an infrared light source.

20 3. The apparatus of claim 1, wherein said first location is in a light pathway between said object and said lens.

4. The apparatus of claim 1, wherein said second location is in the light pathway between said lens and said sensors array.

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5. The apparatus of claim 1, wherein said first translation module comprises a plurality of feeding screws and feeding rods.

6. The apparatus of claim 1, wherein said power module comprises a plurality of power supplies, motors, gears, and belts.

5 7. The apparatus of claim 1 further comprising:
 a second translation module connected with said light sources and said image capture module, and said second translation driven by said power module;
10 a control module connected with said power module and said image capture module; and
 a loading platform module having a platform and therein all said modules and said light sources placed.

15 8. The apparatus of claim 7, wherein said control module comprises a plurality of host units for data processing and circuits for executing scanning process.

20 9. A scanner comprising:
 an image capture module having at least a lens and a sensors array for capturing light after scanning an object;
 a plurality of light sources comprising visible light source and an infrared light source;
25 a first translation module connected with said lens and said sensors array of said image capture module, and said first translation module for changing a first location of said lens and a second location of said sensors array according to using different said light sources;
 a power module connected with said first translation module and

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said light sources for supporting energy to said first translation module and said light sources;

5 a second translation module connected with said light sources and said image capture module, and said second translation driven by said power module;

a control module connected to said power module and said image capture module; and

10 a loading platform module having a platform and therein all said modules and said light sources placed.

10 10. The scanner of claim 9, wherein the distance between said first location and said object is an object length in a light pathway.

15 11. The scanner of claim 9, wherein the distance between said second location and said lens is an image length in said light pathway.

12. The scanner of claim 9, wherein said first translation module comprises a plurality of feeding screws and feeding rods.

20 13. The scanner of claim 9, wherein said power module comprises a plurality of power supplies, motors, gears, and belts.

14. A method of scanning by a scanner comprising:

using a plurality of light sources with different wavelengths;

25 changing a first location of a lens according to said light source; and

changing a second location of a sensors array according to said

light source.

15. The method according to claim 14, wherein said light sources are a visible light source and an infrared light source.

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16. The method according to claim 14, wherein the distance between said first location and said object is an object length in an imaging system and is changed by a plurality of first translation devices.

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17. The method according to claim 14, wherein the distance between said second location and said lens is an image length in said imaging system and is changed by a plurality of second translation devices.